When philosophers explain the distinction between the *a priori* and the *a posteriori*, they usually characterize the *a priori* negatively, as involving a kind of justification that does *not* come from experience. But this only raises the question: If we ever do have *a priori* justification for anything, where *does* this justification come from? One answer often given by those who believe that we sometimes have *a priori* justification is that it comes from a special faculty of “intuition” or “rational insight”. But without any further explanation of how this faculty of intuition or insight operates, appealing to this special faculty seems to be no more than a *label* for the problem rather than a solution to it.

For these reasons, it seems that we need a new conception of the distinction between the *a priori* and the *a posteriori*. I shall propose such a new conception here. Most discussions of the *a priori* have focused either on the difference between *a priori* knowledge and empirical knowledge, or else on the difference between *beliefs* that are justified *a priori* and beliefs that are justified *a posteriori*. In developing my proposal, I shall take a different approach. I shall start by initially focusing, not on knowledge or on the justification of beliefs, but instead on the justification of *inferences* and *inferential dispositions*; only after explaining how the distinction works in this inferential case shall I turn to the justification of beliefs.

1. The nature of inference

The first task before me, then, is to explain how I conceive of the phenomenon of inference. The most important fact about inferences is that an inference is typically not an attitude towards a single proposition, but rather an attitude towards what I shall call an “argument” – where an argument is a structured entity, composed out of propositions. The simplest arguments consist of a pair of items: a set of propositions – the argument’s *premises* – and a further proposition – the argument’s *conclusion*. More complex arguments may include *sub-arguments*, either instead of or in addition to a set of premises, as well as an ultimate conclusion for the argument as a whole.

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1 I have given a sketch of this conception of inference elsewhere; see in particular Wedgwood (2012).
This way of conceiving of arguments is familiar from systems of natural deduction in logic. Every instance of the rules of inference that are recognized in such systems would count as an argument in this sense. For example, every instance of modus ponens (also known as ‘if’-elimination) consists of a set of premises – two premises of the form ‘If p, then q’ and p – and a conclusion – the corresponding proposition q. Similarly, in every instance of conditional proof (also known as ‘if’-introduction), instead of a set of premises, there is a sub-argument, from a premise p to a conclusion q, and as the conclusion of the whole argument, the corresponding conditional proposition ‘If p, then q’.

Within this framework, there is no reason for us not to allow that in some cases, the set of propositions that constitutes the argument’s premises may be simply the empty set. The idea of such zero-premise inferences is familiar from natural-deduction systems of logic, and it is a simple generalization of the basic idea of arguments as abstract structures built up out of propositions.

As I said above, an inference is a kind of attitude towards an argument. Strictly speaking, however, there are two importantly different forms that the phenomenon of inference can take. In one form, an inference is a mental event, which occurs at a particular time; in the other form, an inference is an enduring mental state, which is stored in the thinker’s memory as a relatively permanent feature of that thinker’s system of beliefs. The mental event of inference can be thought of as an event of forming or coming to have the corresponding enduring mental state of inference. Just to have some terminology for marking this distinction, I shall call the enduring mental state the state of “accepting” the relevant argument, and I shall call the corresponding mental event the event of “drawing” the relevant inference. However, to keep things simple, for the rest of this discussion, I shall mostly ignore the mental event of drawing an inference, and concentrate on the enduring state of “accepting” an argument instead.

To “accept” an argument, as I am using the term here, need not involve accepting either the premises or the conclusion of the argument. It is simply to accept the argument itself as a whole – which is something that you might do even if you did not believe either the argument’s premises or its conclusion, but were simply supposing the argument’s premises, purely “for the sake of argument”. Some philosophers might be tempted to say that accepting an argument in this way is simply to believe that the argument’s premises entail the conclusion, or at least that the conclusion is made probable by the

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2 For an example of such a system of natural deduction, see Tennant (1990).
premises. But then it would be impossible to accept an argument if one lacked such a belief – as many unsophisticated thinkers would have to, on account of their not even possessing the concept of entailment or probability. Since it seems to be possible for thinkers to accept an argument even if they lack a belief of this kind, I shall propose a more general conception of what it is to “accept an argument” here.

According to the conception that I propose, to “accept” an argument is to have a conditional belief in the argument’s conclusion – conditionally on the assumptions of the argument’s premises and sub-arguments. In the simple case of a single-premise argument, to accept the argument would be to have a conditional belief in the conclusion, conditionally on the assumption of the premise. This sort of conditional belief is not an attitude towards a single proposition $q$; it is intrinsically an attitude towards a pair of propositions $p$ and $q$ – the attitude of conditionally believing $q$, given the assumption of $p$. One can have such a conditional belief in $q$ given $p$ even if one does not have an unconditional belief either in $p$ or in $q$. One might simply be supposing the premise $p$ purely for the sake of argument, and accepting the conclusion $q$ purely conditionally on the assumption of that premise.

One way of thinking of such conditional beliefs is as follows. To accept $q$ conditionally on the assumption of $p$ is, roughly, to engage in a kind of make-believe: one in effect simulates the state of believing the proposition $p$, and also simulates the adjusted belief-system that one is committed to having in the event of one’s learning $p$; one conditionally accepts $q$ on the assumption of $p$ just in case this adjusted system of beliefs contains a belief in $q$.

According to the proposal that I am making here, to accept a simple single-premise argument is to have a conditional belief of this sort.

In addition to these simple cases of single-premise arguments, however, there can be other more complex cases as well. In some cases, there are several premises rather than just a single premise: in these cases, to accept the argument is to have a conditional belief in the conclusion, conditionally on the assumption of all the argument’s premises. In other cases, the argument’s premise-set is the empty set: in these cases, to accept the argument is simply to have an unconditional belief in the argument’s conclusion.

Finally, to explain what it is to accept an argument that involves sub-arguments, we need to make sense of a sort of supposition or assumption that has a whole argument, rather than a single proposition (or even a set of propositions), as its object. As I have

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3 I cannot give a full account of the nature of these conditional beliefs here; but for an example of such an account, see Edgington (1995).
suggested, to suppose a proposition \( p \) (“purely for the sake of argument”) is roughly like engaging in a kind of make-believe – in effect, a state of simulating the state of really believing the proposition \( p \). To suppose a whole argument is, in a parallel way, like the state of simulating the state of accepting the argument, in the sense that I have explained. In this way, it seems that we can make sense of the idea of conditionally believing a conclusion, conditionally on the assumption of a sub-argument. In general, then, to accept an argument \( A \) is conditionally to believe \( A \)’s conclusion, conditionally on the assumptions of \( A \)’s premises and sub-arguments.

On some views, it is part of the nature or essence of the attitude of belief that whenever an agent believes a proposition \( p \), the belief is correct if and only if the proposition \( p \) is true.\(^4\) There is a natural way of extending this view to give an account of the nature of the state of accepting an argument. According to this extension of the view, the attitude of accepting an argument is correct if and only if the argument is truth-preserving. In the simplest cases, an argument without sub-arguments counts as truth-preserving if and only if it is not the case that all the premises are true while the conclusion is not true. In more complicated cases, an argument counts as truth-preserving if and only if it is not the case that all the argument’s premises are true and all its sub-arguments are truth-preserving, while the conclusion is not true.

It seems plausible to me that all these beliefs and conditional beliefs come in degrees. That is, one can believe a conclusion, conditionally on the assumptions of various premises and sub-arguments, to varying degrees. In some cases, one might be conditionally certain – that is, one might have the highest possible degree of conditional belief in a conclusion, given the assumptions of the relevant premises and sub-arguments. When one is conditionally certain of the conclusion in this way, one is in effect treating the argument as though it were deductively valid. (This would be a way of “treating arguments as deductively valid” that is available to agents who are incapable of thinking explicitly about “deductive validity” because they do not even possess the concept of validity.)

In other cases, however, one might have a significantly lower level of conditional belief in an argument’s conclusion, given the assumptions of the argument’s premises and sub-arguments. This is in effect to treat the argument as though it were not deductively valid, but at most inductively strong. For most of this discussion, however, I shall focus only on cases where accepting the argument involves being conditionally certain of the

\(^4\) I have defended a view of this kind myself; see Wedgwood (forthcoming).
conclusion, conditionally on the assumptions of the argument’s premises and sub-arguments; I shall touch only briefly on cases where one’s acceptance of the argument involves a lower degree of conditional belief in the conclusion, conditionally on the argument’s premises and sub-arguments.

If beliefs come in degrees, then these degrees range over the whole gamut from complete confidence, through increasing degrees of uncertainty and doubt, all the way to total disbelief. This makes it easy for us to make sense of what we might call anti-inferences and anti-arguments. An anti-argument is just like an argument, except that accepting an anti-argument involves conditionally disbelieving its conclusion, conditionally on the assumptions of its premises and sub-arguments. Presumably, the correctness of an anti-inference is a matter, not of the anti-inference’s being truth-preserving, but rather of its being truth-excluding, in the sense that if the premises are true, then the conclusion is false. I shall explore some such anti-arguments later on, when considering the distinctive inferential role of negation.

2. Rational inferential dispositions

Suppose that a thinker accepts a certain argument. What would make the thinker’s acceptance of that argument (retrospectively) rational or justified?5

In one sense, you might rationally accept a complicated argument, merely because a respected authority figure asserts that the argument is valid. In that case, the argument itself does not represent the inferential process that explains your acceptance of it, because you accept the argument as a result of accepting a further argument – in effect, the argument from ‘The authority figures asserts that the argument is valid’ to the conclusion ‘The argument is valid’. In what follows, I shall set such cases aside. I shall focus solely on cases where the thinker’s acceptance of the argument is explained by the thinker’s having attitudes towards each of the argument’s sub-arguments, as well as towards the argument as a whole, and does not in this way depend on the thinker’s acceptance of any other argument.

5 The notion of a thinker’s acceptance of an argument’s being “retrospectively” justified is the analogue, for inferences, of the notion of a belief’s being doxastically justified. I shall consider when an inference counts as “prospectively” justified – the analogue of the notion of a thinker’s having propositional justification for believing a proposition – later on. (For recent discussion of the distinction between doxastic and propositional justification, see Turri 2010.)
When the question is understood in this way, I propose the following answer. A thinker’s attitude of accepting an argument is (retrospectively) justified if and only if the thinker’s having this attitude is the manifestation of a *rational inferential disposition* that the thinker has – a disposition that we could call a kind of rational inferential *ability* or *competence*.

The structure of each of these dispositions seems to be as follows. There is a certain range of arguments – typically, the arguments that exemplify a certain pattern or form of inference – such that, *ceteris paribus*, in normal cases in which the thinker *considers* an argument within this range, the thinker responds to considering this argument by accepting the argument. For example, I believe that I have a disposition of this kind to accept instances of *modus ponens*. *Modus ponens* arguments are such that, *ceteris paribus*, in normal cases in which I consider one of these arguments, I respond by accepting the argument in question.

It seems to be indispensable to appeal to inferential dispositions of this sort in giving an account of rational or justified inferences, for the following reason. Every argument is in fact an instance of infinitely many argument-schemas. For example, every instance of *modus ponens* – indeed, every two-premise argument whatsoever – is an instance of the schema: ‘*p, q, therefore r*’. So it seems that it is not always the case that whenever you accept an argument that is in fact an instance of *modus ponens*, your acceptance of that argument is (retrospectively) justified. In particular, your acceptance of the argument will not count as retrospectively justified if it is in fact the manifestation of a crazy disposition, which is also manifested in your acceptance of all sorts of fallacious and invalid arguments, as well as in your acceptance of this particular argument (which happens to be an instance of *modus ponens*). In general, your acceptance of an argument will be retrospectively justified if and only if it is the manifestation of a *rational* inferential disposition.

Which inferential dispositions count as rational dispositions of this sort? In general, it seems that whether or not such an inferential disposition is rational depends, in part, on the *form* of the arguments that the disposition prompts the thinker to accept; that is, it depends on the pattern or argument-schema that these arguments exemplify.

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6 Since we are thinking of “accepting” an argument as an enduring mental state here (rather than as the mental event of drawing an inference), we should also conceive of “considering an argument” as the enduring state of having that argument “within one’s ken”, as one of the arguments towards which one has any attitudes at all (rather than as a mental event of actively contemplating the argument).
There are two cases here. First, in the case of some argument-schemas, the thinker may have a rational disposition to accept any instance of those argument-schemas that she considers, without exception. These inferences would be in a sense indefeasible: no further factors can remove the rationality of accepting instances of these schemas. It may be, for example, that your disposition to accept instances of certain basic logical rules of inference (such as *modus ponens* or the like) is an indefeasibly rational disposition of this first kind. If that is right, then no instances of these basic rules of inference can be defeated, by any further features of the thinker’s cognitive circumstances.

Secondly, in the case of certain other argument-schemas, special circumstances can arise which defeat certain instances of those other argument-schemas, and the thinker only has a rational disposition to accept the undefeated instances of those schemas. Still, even in this second kind of case, it is the default position that the thinker’s rational disposition normally inclines the thinker to accept instances of these schemas. The circumstances that defeat certain instances of these argument-schemas are in some way (which we will not have time to explore here) special and unusual – in some way, these circumstances count as the exception to the normal rule.

We have already used the notion of a rational inferential disposition to characterize when a thinker’s acceptance of an argument is retrospectively justified: your acceptance of an argument is *ex post* or retrospectively justified if and only if it is the manifestation of such a rational inferential disposition. Now that we also have articulated the notion of an “undefeated instance” of an argument-schema, we can also characterize when a thinker has *ex ante* (or prospective) justification for accepting an argument: you have *ex ante* (prospective) justification for accepting an argument if and only if the argument is an undefeated instance of an argument-schema such that you have a rational inferential disposition to accept undefeated instances of that schema.7

However, even if the form of these argument-schemas is part of what determines whether a thinker’s disposition to accept instances of these schemas counts as rational, it seems that some fact about the thinker at the relevant time must also be involved in

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7 For this distinction between “*ex post*” (or retrospective) justifiedness and “*ex ante*” (or prospective) justification, see Goldman (1979). As I remarked in note 5 above, contemporary epistemologists typically mark this distinction by contrasting “doxastic” and “propositional” justification. However, as I have explained elsewhere (Wedgwood forthcoming), Goldman’s terminology is preferable, because in fact this distinction is not limited to the justification of beliefs, but in fact is exemplified throughout the whole normative domain.
determining whether or not this disposition is rational. This is because it appears that even if it is perfectly rational for one thinker to be disposed to accept instances of a certain argument-schema, it can fail to be rational for another thinker to have such a disposition. In short, two different thinkers – or even the same thinker at two different times – can differ with respect which argument-schemas it is rational for each thinker to be disposed to accept at each time.

So, it seems, there must be some fact about the thinker at the relevant time that determines which argument-schemas it is rational for the thinker to have a disposition to accept at that time. But what fact about the thinker is this?

3. Two kinds of justification for inferential dispositions

As I shall propose in this section, there are two importantly different kinds of case here. In some cases, an inferential disposition is necessarily rational for any thinker with certain basic cognitive capacities. In these cases, I propose, if a thinker has this inferential disposition, the rationality of the disposition is ultimately explained purely by the fact that the thinker has these basic cognitive capacities; as I shall explain, these inferential dispositions have a kind of basic a priori justification. In other cases, the rationality of an inferential disposition is not explained purely by the thinker’s basic cognitive capacities in this way; these inferential dispositions do not have this kind of basic a priori justification.

Which basic cognitive capacities are relevant here? Taking different sets of basic cognitive capacities to be relevant could lead to different conceptions of a priori justification. One approach, which seems to lead to a plausible and theoretically interesting conception of what it is for the disposition to accept instances of a certain argument-schema to count as a priori justified, involves focusing on the capacities that are necessarily involved in even considering instances of this argument-schema. These capacities include, most prominently, the capacities for the concepts and types of attitudes that are involved in considering instances of this schema.

Several philosophers have suggested that the justification of certain inferences may be explained by what it is for thinkers to possess of some of the concepts that are deployed in the inference.8 The possibility that I am exploring here is in effect a generalization of this suggestion. Specifically, I am exploring the possibility that the rationality of some

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8 For proposals of this sort, see for example Boghossian (2003) and Peacocke (1992).
inferential dispositions may be explained by our basic cognitive capacities – where this set of capacities includes, not just our possession of various concepts, but also our capacity for the various attitude-types that we are capable of (and perhaps other capacities as well).

If it is ever true that the rationality of an inferential disposition is explained by the basic cognitive capacities that the thinker has, it should be possible to fill in the details of this explanation. The proposal that I am making here does not depend on any particular way of filling in these details. Nonetheless, it may be helpful, to fix ideas, for me to give a sketch of how such explanations might work. Since the thinker’s possession of the relevant concepts is among the basic cognitive capacities that I am taking to be relevant here, one way of filling in the details would be to adapt the suggestions that philosophers have made about how the rationality of certain inferential dispositions is explained by the thinker’s possession of the relevant concepts.

For example, consider the disposition to accept instances of *modus ponens*. The capacities that are necessary for even considering instances of *modus ponens* include the capacity for thoughts of the form ‘If *p*, then *q*’: this is the capacity that many philosophers would call one’s “possession” of the “concept ‘if’”. So the relevant capacities in this case include one’s possession of the concept ‘if’. Perhaps possessing the concept ‘if’ essentially involves having a disposition to accept instances of *modus ponens*, and this fact about the concept constrains the truth conditions of thoughts involving the concept ‘if’ in such a way as to ensure that all instances of *modus ponens* are truth-preserving. If this is the right account of what it is to possess the concept ‘if’, it may be the thinker’s possession of this concept that explains the rationality of the thinker’s being disposed to accept instances of *modus ponens*. Since the possession of this concept is one of the relevant cognitive capacities, this would be a case in which these cognitive capacities explain why it is rational for any thinker who has these capacities to have this inferential disposition.9

Another example might involve concepts – such as *negation* perhaps – such that possessing these concepts makes it rational to have certain dispositions with respect to certain patterns of *anti-inference*, as well as dispositions with respect to certain patterns of inference. Specifically, it may be that it is rational, for everyone who possesses the concept that is expressed by ‘not’, to have a disposition to have a conditional *disbelief* in *p* conditionally on the assumption of ‘¬*p*’, and also a disposition to have a conditional

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9 This is the sort of answer that I have advocated elsewhere (see e.g. Wedgwood 2011).
belief in ‘¬p’ conditionally on the assumption of any sub-anti-argument acceptance of which would involve such a conditional disbelief in p. It may be that possession of the concept that is expressed by ‘not’ essentially involves having these dispositions, and this fact about the concept constrains the truth conditions of thoughts involving the concept in such a way as to assume that all instances of these patterns of inference and anti-inference are correct. This could be what explains the rationality of having these inferential and anti-inferential dispositions.

In addition to the concepts that are expressed by the logical constants, there may also be other concepts such that the thinker’s possessing these concepts explains why it is rational for the thinker to be disposed to accept instances of certain argument-schemas. For example, perhaps your possession of the concept ‘uncle’ makes it rational for you to be disposed to accept arguments from any premise of the form ‘x is an uncle’ to the corresponding conclusion ‘x is male’; and perhaps your possession of the concept ‘knowledge’ makes it rational for you to be disposed to accept arguments from any premise of the form ‘x knows p’ to the corresponding conclusion p. In general, it may be plausible to take this view of many of the kinds of inference that have traditionally been regarded as conceptually or analytically valid.

It may be that these logical and conceptually valid rules of inference are indefeasible rules, in the sense that it is rational for any thinker who has the relevant capacities to be disposed to accept any instances of these rules, regardless of what background information the thinker may have. Even if there are indefeasible rules of this kind, there seem also to be some defeasible rules, such that it is rational for any thinker who is capable of considering instances of these rules to be disposed to accept undefeated instances of those rules, but not defeated instances of these rules. For example, one such defeasible rule of inference might be what we could call the “rule of external-world introduction” – where in each instance of this rule, the premise is some proposition of the form ‘It looks to me as though p is the case’ and the conclusion is the proposition p itself. Clearly, it is not rational for every thinker who is capable of considering instances of the rule to be disposed to accept any instances of this rule – since there can be defeated instances of this rule, such as instances in which the thinker has background information that he or she has just taken a powerful hallucinogen. But perhaps it is still

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10 The “correctness” of an anti-inference, as I suggested above, requires that the relevant argument is truth-excluding rather than truth-preserving. This proposal about negation is related to those of Rumfitt (2000) and Peacocke (1986), albeit with some minor differences that I cannot attempt to explore here.
rational for every thinker who has the relevant capacities to be disposed to accept the normal, undefeated instances of this rule.

For our purposes, however, the precise details of how the rationality of each of these inferential dispositions is explained by the fact that the thinker has these basic cognitive capacities do not matter. It also does not matter whether the explanation of the disposition’s rationality is based on the thinker’s possession of some concept, or on some other basic cognitive capacity instead. In general, there are many different ways in which the details of this general approach could be filled in; the account of the a priori that I am proposing here does not depend on these details. All that matters is that there are certain argument-schemas such that the rationality of the thinker’s disposition to accept instances of these schemas is explained purely by the fact that the thinker has the capacities that are necessary for even considering instances of those schemas. So long as this is the case with respect to some argument-schemas, then there are at least some examples of the first sort of justification that I am focusing on here.

For our purposes, the important point is that if there are any such inferential dispositions, these dispositions are rational for all thinkers who have these basic cognitive capacities, purely in virtue of the fact that they have these capacities. The central proposal that I am making in this paper is that these inferential dispositions have a certain basic kind of a priori justification.

There is an objection that many philosophers will be tempted to make here. How could the mere fact that a thinker has certain cognitive capacities ever explain why an inferential disposition is rational? Could it never happen that certain basic cognitive capacities require being disposed to make certain invalid or irrational inferences? For example, could there not be intrinsically defective concepts – such as, concepts that lead to paradox, perhaps, like the concepts of truth, or free will, or vague concepts? If there are defective concepts, then how could the thinker’s possession of these concepts explain the rationality of any inferential disposition?

As a matter of fact, I am inclined to deny that there are any defective concepts in this sense. In general, my view is that basic cognitive capacities cannot require having any inferential dispositions unless those dispositions are essentially rational – that is, rational in all possible cases.11 But for present purposes, I do not have to repeat the arguments that I have given for this view. This is because I am here simply proposing

11 For my arguments in favour of this view, and my defence of this view against a range of objections, see Wedgwood (2007).
an account of what it is for an inferential disposition to be justified \textit{a priori}. So the account that I am proposing here does not entail that the rationality of inferential dispositions is ever explained purely by the basic cognitive capacities that the thinker has. My account entails only that if the rationality of inferential dispositions is never explained purely by the thinker’s basic cognitive capacities in this way, then no inferential disposition is justified \textit{a priori}. This does not seem an implausible consequence of my proposal: if our basic cognitive capacities (including our possession of concepts and our capacities for the various attitude-types) never explain the rationality of any inferential disposition, then it is hard to see how any inferential disposition can be justified \textit{a priori}.

At all events, even if there are cases of this first sort, in which the rationality of an inferential disposition is \textit{a priori}, explained purely by the thinker’s basic cognitive capacities, there may also be cases of the second sort as well. In cases of this second sort, the capacities that are necessarily involved in even considering the instances of a certain argument-schema do not suffice to explain why the thinker’s disposition to accept instances of the schema is rational. Instead, there is something else, something extra, which is present in the thinker’s mind – something that could have been absent even if the thinker had still had the capacity for considering instances of this argument-schema – that explains why the disposition to accept instances of the argument schema is rational.

For example, perhaps, you have a disposition to infer directly from the proposition that both hands on your watch are pointing straight up to the conclusion that it is 12 o’clock. In drawing this inference, you are manifesting a rational inferential disposition. But it seems plausible that the rationality of this inferential disposition is not explained purely by your having the capacities that are necessary for you even to consider instances of the relevant pattern of inference. Instead, the rationality of this disposition seems to be explained by your having a rational \textit{background belief} to the effect that your watch is a reliable time-piece, and when a reliable time-piece’s hands are both pointing straight up, that indicates that the time is 12 o’clock. When the rationality of an inferential disposition is explained in part by rational background beliefs in this way, I shall call it a “non-basic” inferential disposition.

Again, the point that is crucial for our purposes here is not to investigate exactly what explains the rationality of inferential dispositions in cases of this second sort. The crucial point is simply that we can draw this distinction between two sorts of case: (a) cases in which the rationality of your having a certain inferential disposition is explained purely by your having basic cognitive capacities of the relevant kind; and (b)
cases in which the explanation depends in addition on certain further factors that happen also to be present in your mind, over and above the mere fact that you have these cognitive capacities. My central proposal is that rational inferential dispositions of the first sort have a basic kind of *a priori* justification, while inferential dispositions of the second “non-basic” sort do not have this basic kind of *a priori* justification.

Some philosophers might regard my usage of these terms ‘*a priori*’ and ‘*a posteriori*’ as eccentric. But in fact, it seems to me, my usage of these terms is entirely appropriate. First, it is consistent with the meanings of these two phrases in Latin: the phrase ‘*a priori*’ means “from what comes beforehand” and ‘*a posteriori*’ means “from what comes later”. The basic cognitive capacities necessary for even considering instances of the relevant argument-schemas – the capacities that explain the rationality of inferential dispositions of the first kind – in a clear sense “come before” the additional further factors – like the thinker’s background beliefs – which are involved in explaining the rationality of inferential dispositions of the second kind.

Secondly, this way of understanding the distinction is in harmony with one of the main ways in which Kant describes the *a priori*, as what our cognitive capacities somehow “supply out of ourselves” (was unser eigenes Erkenntnisvermögen... aus sich selbst hergibt). If the rationality of your having a certain inferential disposition is explained purely by your having certain basic cognitive capacities, then in a good sense these capacities can be thought of as “supplying” that inferential disposition “out of themselves”.

Of course, this talk of our cognitive capacities’ “supplying” something “out of themselves” is a metaphor. But it is a natural metaphor to use; and other metaphors that seem equally natural here also chime with traditional ways of describing the *a priori*. Thus, we could talk of the distinction between what is also “built into” the basic cognitive capacities of the mind itself, and what we have access to as a result of taking in further information over and above what is already built into these capacities. What is *a priori* “flows from” resources that are in some way already within these capacities of the mind itself, while what is *a posteriori* flows from information that is only contingently present in minds that possess those basic capacities.

One aspect of this picture of the *a priori* that might surprise some philosophers is that it gives no special role to sensory experience. I have not characterized the basic kind of *a priori* justification that I am concerned with here by claiming that it is “independent” of

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12 See the *Critique of Pure Reason*, Introduction to the Second Edition (B 1).
sensory experience or the like. I have characterized it as a kind of justification that depends purely on these basic cognitive capacities. Presumably, however, the relevant facts about my sensory experiences – the facts that could play a justificatory role in relation to some of my inferential dispositions – are not guaranteed to be present in my mind purely by my possession of these basic cognitive capacities. So, if one of my inferential dispositions is justified in part by such facts about my sensory experiences, its justification is not a priori in the basic way that I have described. However, there could in principle be other cases, in which the extra factor that plays a crucial role in justifying the inferential disposition is not a fact about the thinker’s sensory experiences, but a fact about some other mental phenomena that happen to have been present in the thinker’s mind. So long as this fact is not guaranteed to be present by the thinker’s possession of these basic cognitive capacities, this would not be a case of a priori justification (of the basic kind that I have characterized here).

So far, I have only offered a proposal about the justification of inferential dispositions. In the next section, I shall explain how to use this proposal to develop a conception of the distinction between a priori and a posteriori justified beliefs.

4. From a priori rational inferential dispositions to a priori justified beliefs

I have already made a proposal, in Section 2, about how these rational inferential dispositions are connected to justified inferences. The proposal was simple: an inference is ex post (or retrospectively) justified if and only if it is the manifestation of a rational or justified inferential disposition; and there is ex ante (or prospective) justification for a thinker to accept an argument if and only if the argument is an undefeated instance of an argument-schema such that the thinker has a rational disposition to accept undefeated instances of that schema.

This suggests an equally simple account of when inferences are a priori justified: an inference is retrospectively a priori justified if and only if it is the manifestation of an a priori justified inferential disposition; and there is prospective a priori justification for a thinker to accept an argument if and only if the argument is an undefeated instance of a schema that the thinker has an a priori justified disposition to accept.

Admittedly, every manifestation of these dispositions is triggered by a contingent event that happens to be present in the thinker’s mind – namely, the event of the thinker’s

13 In this way, my characterization differs from those of such philosophers as BonJour (1999) or Burge (1994).
considering the relevant argument; and this event is not guaranteed to be present purely because of the thinker’s having the relevant cognitive capacities. However, it still seems plausible that the manifestations of these dispositions are justified *a priori*. The event of considering an argument does not involve taking in any new information from the outside world, over and above what is already built into the capacities that are necessary for considering the argument. Moreover, the event of one’s considering the argument is not necessary for one to have *ex ante* or prospective justification for accepting the argument: in this sense, the event of considering the argument is not a reason that supports or justifies accepting the argument; it is just a way in which the mind can be triggered to make explicit to itself what is already implicit within it.

So, I shall suppose that whenever one manifests an *a priori* justified inferential disposition of this sort, one’s acceptance of the particular argument that one is considering is also justified *a priori*. For example, suppose that one considers an instance of disjunction-introduction, of the form ‘\(p; \text{ so, } p \lor q\)’, and responds by accepting this argument – that is, by conditionally believing the conclusion ‘\(p \lor q\)’ given the assumption of the premise \(p\). Then one’s acceptance of this argument is justified *a priori*.

How can we get from being *a priori* justified in accepting certain arguments to being *a priori* justified in believing certain propositions? One very simple way in which this might happen is if the justified inferential dispositions that the thinker has include dispositions to accept certain zero-premise arguments. (For example, one justified inferential disposition might be a disposition to accept any argument whose conclusion is a proposition of the form ‘\(p \lor \neg p\)’, even if the argument has no premises at all.) In these cases, acceptance of one of these zero-premise arguments is already an outright belief in the conclusion of the argument.

However, there is also a general connection between justified inferences and justified beliefs in the case of arguments that have assumptions – including both sub-arguments and premises. In general, the connection seems to be this. Suppose that a thinker is justified in accepting an argument that involves a certain assumption \(A\) – regardless of whether this assumption \(A\) is a premise or a sub-argument – and suppose that the thinker is also justified in accepting this assumption \(A\). Then the thinker is also justified in believing the conclusion of the whole argument, not just conditionally on the assumption of *all* of the argument’s the sub-argument and premises, but conditionally
on a *smaller* set of assumptions – namely, a set of assumptions that includes all of the argument’s assumptions other than $A$.\textsuperscript{14}

Thus, even if all of the thinker’s justified inferential dispositions are dispositions to accept arguments that involve either premises or sub-arguments or both, it is still possible for the thinker to get justified beliefs out of justified inferences. The thinker simply needs to be justified in accepting an argument that has a sub-argument, while simultaneously being justified in accepting that sub-argument.

The simplest illustration of this involves the kind of suppositional reasoning that is often called “conditional proof”. To illustrate this point, suppose that (as I suggested in the previous section) it is rational for anyone who possesses the concept *uncle* to be disposed to accept any argument from a premise of the form ‘$x$ is an uncle’ to the corresponding conclusion ‘$x$ is male’. Then you might consider the argument from ‘Ralph is an uncle’ to ‘Ralph is male’, and, through manifesting this disposition, you might accept this argument. Then, by means of an instance of conditional proof in which this argument is a sub-argument, you could respond to your accepting this argument by having an outright belief in the material conditional ‘If Ralph is an uncle, Ralph is male’.

In all these cases, then, *a priori* justified beliefs simply correspond to *a priori* justified inferences of a certain distinctive sort. Specifically, they correspond to *a priori* justified inferences that, in the terminology of many natural-deduction systems of logic, have no “undischarged assumptions”.\textsuperscript{15} In the terminology that I have been employing here, these inferences consist in the acceptance of arguments that have no premises, but at most certain sub-arguments. Whenever a thinker is *a priori* justified in accepting an argument of this sort, and simultaneously *a priori* justified in accepting all of the argument’s sub-arguments, she is also *a priori* justified in having the corresponding belief.

The general connection between justified inferences and justified beliefs that I proposed above entails the following familiar idea: if the thinker is justified in accepting an

\textsuperscript{14} Strictly, as I have stated it here, this connection requires that the thinker must be justified in accepting the assumption $A$ with maximum confidence. Where $A$ is a sub-argument, this connection is in effect the idea of “discharging” the assumptions of the sub-argument’s premises. For more details, see Tenant (1990, 56).

\textsuperscript{15} This point is clearly articulated by Peacocke (1993) – although Peacocke combines this point with a number of other theses that I am not defending here.
argument, and also simultaneously justified in accepting of all of the argument’s assumptions with the highest level of confidence, then the thinker is also justified in believing the conclusion of the whole argument. So, it seems, when the thinker is a priori justified in accepting an argument, and is also a priori justified in accepting all the argument’s assumptions, then the thinker is justified in believing the argument’s conclusion as well.

There are other ways in which we can now explain a priori justified beliefs as well. For example, suppose that in addition to having justified inferential dispositions to accept certain arguments, the thinker also a justified disposition to reason in accordance with a certain rule of proof. Roughly, manifesting such a disposition will involve responding to the fact that one has a justified belief in a certain proposition, and is simultaneously considering a certain further proposition, by having a belief in that further proposition as well. For example, suppose that you are a priori justified, as a result of a certain sort of suppositional reasoning, in believing a proposition \( p \); then it may be rational for you to respond to having this sort of justified belief in \( p \) by also believing the proposition that \( p \) is necessarily true. If the rationality of your being disposed to reason in accordance with this rule of proof is explained purely by the basic cognitive capacities that you have, then this disposition is justified a priori; given that your belief in \( p \) is itself justified a priori, your belief in the proposition that \( p \) is necessarily true, which you have through following this rule of proof, is also justified a priori. So this could be a further way of having a priori justified beliefs.

Once we can have a priori justified beliefs in any of these ways, then it may be possible for these a priori justified beliefs to form part of the body of background beliefs that explains the justification of other beliefs and dispositions. In particular, as we have seen, such background beliefs may explain the justification of certain non-basic inferential dispositions. In some cases, it may be that none of the thinker’s a posteriori justified background beliefs are relevant to the justification of one of these non-basic inferential dispositions, but some of the thinker’s a priori justified beliefs are relevant. In this case, one may regard this non-basic inferential disposition as also in a non-basic way justified a priori.

The most plausible example of this case would involve a logician who has a disposition to accept instances of certain extremely complicated and sophisticated patterns of

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16 The terms ‘rule of inference’ and ‘rule of proof’ were first introduced by Smiley (1963, 114). For a classic discussion of this distinction (in which these two types of rules were labelled “schematic” and “thematic” rules respectively), see Geach (1980, 109-10).
argument, where the rationality of the logician’s accepting these arguments is not explained purely by the logician’s possession of the capacities that are necessary for considering those arguments, but rather by the fact that the logician has an \textit{a priori} justified belief that arguments of that form are valid. Then the logician’s disposition to accept these sophisticated arguments might be an example of a non-basic inferential disposition that counts as \textit{a priori} justified in this way.

5. \textbf{Features and advantages of this approach}

One significant advantage of this approach is that we have not merely characterized the \textit{a priori} negatively, in terms of where \textit{a priori} justification does not come from; we have characterized it positively, in terms of where \textit{it does} come from – namely, the rational dispositions that are built into these basic cognitive capacities.

Moreover, by characterizing the \textit{a priori} in this way, we also did not have to appeal to “intuitions” or “rational insight” as a fundamental explanatory notion in the theory.\footnote{For an example of a philosopher who takes the notion of an “intuition” as fundamental to the \textit{a priori}, see Bealer (2000); for a philosopher who appeals to “rational insight”, see BonJour (1999).} This is an advantage because without further explanation, this appeal to “intuitions” or “rational insight” has always seemed deeply mysterious. Indeed, we can now explain intuitions away, in a sense. Such intuitions may arise from the inferential dispositions that are rational for us in virtue of our possessing certain basic capacities (like our possession of various concepts, or our capacity for various types of attitudes). For example, as I have already suggested, we can use the framework that I have articulated here to explain why we have the intuition that if some knows a proposition \(p\), then \(p\) is true, or the intuition that if a person is an uncle, then that person is male. This seems to explain why so many intuitions – like the examples that I have just given here – take the form of conditionals, or of universal generalizations of conditionals.

Some philosophers might object: in what way is it more intelligible to appeal to the rational acceptance of arguments that have no premises than to rational intuitions? But as we have seen, these zero-premise inferences are not a special \textit{sui generis} phenomenon; they exist only as part of a system of inferences that also includes inferences that have premises – and every theory needs to explain how such inferences can be rational. So the inferentialist approach that I am proposing does provide a more illuminating account of \textit{a priori} justification than the invocation of “rational intuitions”.

\footnote{For an example of a philosopher who takes the notion of an “intuition” as fundamental to the \textit{a priori}, see Bealer (2000); for a philosopher who appeals to “rational insight”, see BonJour (1999).}
One might wonder: Is this conception of the *a priori* committed to a questionable kind of *foundationalism*? In appealing to a particular instance of a certain pattern of inference to explain why a certain belief is *a priori* justified, I might be thought to imply either or both of the following two archetypal foundationalist theses: first, the thesis that the prospective or “propositional” justification of any *a priori* belief depends purely on the availability of an inference of the relevant proposition from a suitably “privileged” set of premises (where the *empty* set of premises could clearly be regarded as “privileged” in the relevant way), and does not depend on any holistic coherence relations that that belief stands in to the totality of the thinker’s beliefs; secondly, such a belief can be retrospectively or “doxastically” justified only if it is *based on* the thinker’s in some sense “carrying out” that inference.

Fortunately, the proposal outlined here is not committed to either of these controversial theses. First, the contrast that the first thesis rests on, between (i) the availability of an inference of a conclusion *p* from the empty set of premises and (ii) the holistic coherence of believing *p* with the thinker’s other beliefs, may in fact be a false dichotomy. It may be that the arguments that the thinker is *a priori* justified in accepting are part of what determines what counts as “coherence” among the thinker’s beliefs. For example, the fact that there is an indefeasible argument of this sort from a premise *p* to a conclusion *q*₁ may be at least part of what explains why it would be incoherent for the thinker’s belief-system to include a higher degree of confidence in *p* than in *q*₁; and the fact that there is an indefeasible argument of this sort that has no premises at all for the conclusion *q*₂ may be part of what explains why it would be incoherent to have any degree of belief that falls short of maximum level of confidence in *q*₂.¹⁸

Secondly, my picture does not imply that doxastically justified beliefs must be “based on” the thinker’s “carrying out” any inference (at least not if this is understood as a conscious mental process of some kind). They simply imply that doxastically justified beliefs must be the manifestations of rational dispositions; and the relevant disposition may just be a disposition to respond to “considering” the relevant proposition – that is, to having the proposition “in one’s ken” in the relevant way – by having the kind of doxastic attitude towards the proposition that rational coherence requires. This is, in effect, a disposition to conform to the requirements of coherence among one’s doxastic attitudes in a non-accidental way. So this conception of doxastic justification does not obviously incur any commitments to any controversial sort of foundationalism.

¹⁸ For this picture of the relation between rational inference and rational coherence, see Wedgwood (2012).
One of the most famous controversies in philosophy concerns whether mathematical reasoning is justified \textit{a priori}. Can the approach that is being proposed here shed any light on this controversy?

With respect to mathematics, let us just focus on mathematical proofs. Are we justified \textit{a priori} in accepting such proofs? It will be clear that we are justified if a logicist program, of the sort developed by Crispin Wright (1983), is correct. As Neil Tennant (1987, 275–300) has shown, this sort of logicist program can be put into an inferentialist form, according to which possession of arithmetical concepts involves the capacity for reasoning in accordance with rules of inference that allow all the axioms of Peano arithmetic to be derived from the empty set of assumptions.

Within the framework that is being proposed here, what is distinctive of the logicist program is that it explains the rationality of accepting all the axioms and arguments that are distinctive of arithmetic on the basis of what is involved in our possession of arithmetical concepts. In that sense, the logicist program implies that all the truths of arithmetic are conceptual truths. However, within my framework, our possession of concepts is not the only basic cognitive capacity that can explain the \textit{a priori} justification of an inferential disposition. In principle, other sorts of basic cognitive capacities may also be relevant. Perhaps, for example, in the case of mathematics, the relevant capacities consist of our general ability for understanding certain sort of structures, including the structures of merely possible states of affairs, along with the ability for recognizing the features that are shared by various different sorts of structures. Even if these cognitive capacities do not consist simply in our possession of any particular concepts, it might be that it is our possession of these cognitive capacities that explains the rationality of our accepting the axioms and inferences of mathematics. If so, then even if mathematical truths are not all conceptual truths, our justification for accepting mathematical proofs would still be \textit{a priori}.^{20}

\footnote{This suggestion is offered on behalf of those who take a “structuralist” view of mathematics; for discussions of structuralism in the philosophy of mathematics, see especially Hellmann (2005) and McBride (2005).}

\footnote{Similar points may hold about our justification for philosophical beliefs. But I cannot investigate these difficult meta-philosophical issues here.}
6. Generalizing beyond inferential dispositions

In Section 4, I mentioned that there might be \textit{a priori} justified dispositions to reason in accordance with rules of proof as well as rules of inference. A disposition to reason in accordance with a certain rule of proof is not strictly speaking an inferential disposition, although it is undoubtedly a broadly doxastic disposition (in the sense of a disposition to have a certain belief in response to having certain other beliefs). In this sense, my conception of the \textit{a priori} is not inferentialist in the strong sense that it implies that every case of \textit{a priori} justification involves \textit{a priori} justified inferential dispositions: other doxastic dispositions besides inferential dispositions – like dispositions to reason in accordance with a certain rule of proof – may also count as \textit{a priori} justified.

Indeed, doxastic dispositions of many different kinds may be justified \textit{a priori} – that is, justified purely because of the thinker’s possession of basic cognitive capacities of the relevant sort. For example, the dispositions for taking one’s sensory experiences and apparent episodic memories at face value may also be justified \textit{a priori} in this way. However, while such dispositions may be justified \textit{a priori}, such non-inferential doxastic dispositions are not themselves sources of any \textit{a priori} justified beliefs. The disposition to take one’s sensory experiences at face value will only lead one to have a belief in a proposition \( p \) if that proposition \( p \) is part of the content of one’s sensory experiences; and so what makes it the case that one is justified in believing \( p \) as a result of manifesting this disposition is never just one’s possession of the relevant basic cognitive capacities, but always also the fact of one’s having appropriate sensory experiences as well. Hence such beliefs are only ever justified empirically, not \textit{a priori}.

In general, then, my account of the \textit{a priori} is inferentialist in a somewhat weaker sense: according to this account, \textit{a priori} justified inferences are involved in every case of \textit{a priori} justified belief, and so also in every case of \textit{a priori} knowledge. Even reasoning in accordance with a rule of proof, as we have in effect already seen, will only yield an \textit{a priori} justified belief if all the beliefs to which one responds in reasoning in accordance with that rule are themselves \textit{a priori} justified beliefs. So, \textit{a priori} justified beliefs which manifest a disposition for reasoning in accordance with this rule of proof depend on the thinker’s having other \textit{a priori} justified beliefs as well. It seems then that even in these cases there must be some \textit{a priori} beliefs that arise in some way other than through following such rules of proof. Presumably, these other \textit{a priori} justified beliefs arise from \textit{a priori} justified inferences in the way that I described in Section 4.

Indeed, it is not just doxastic phenomena that can be justified \textit{a priori}. We can make sense of the idea that dispositions of \textit{practical} thought might also count as justified \textit{a
priori. A disposition of practical thought would count as justified *a priori* just in case it is a rational disposition, and the explanation of its rationality is based purely on one’s possession of certain basic mental capacities (not in any further facts about one’s mental life that are not guaranteed to be present by one’s possession of these capacities.)

So, consider our dispositions to form intentions or choices on the basis of our beliefs, and perhaps on the basis of our desires or preference as well. For example, consider the disposition to form the intention to perform an act $A$ in response to the belief that this act $A$ is what one ought to do in the relevant situation. This disposition might be rational or justified purely *a priori* – that is, purely in virtue of what is built into the relevant capacities.

There also seems to be a kind of suppositional practical reasoning that is possible here. One can suppose purely for the sake of argument, that doing $B$ is what one ought to do; and then one can have a purely *conditional intention* to do $B$, conditionally on the assumption that $B$ is what one ought to do. Arguably, this conditional intention is also justified *a priori* – it is a rational conditional intention to have, and its rationality is explained in a fundamentally analogous way to the rationality of *a priori* justified beliefs.

In this way, then, the general theory of the *a priori* that I am advocating here is not really “inferentialist”: it is a theory that fundamentally appeals to the way in which our basic mental capacities can ground the rationality of various dispositions of thought. Nonetheless, when it comes to justified beliefs (and to knowledge), this approach gives a fundamental explanatory role to the notion of *a priori* justified inference.21

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**References**


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